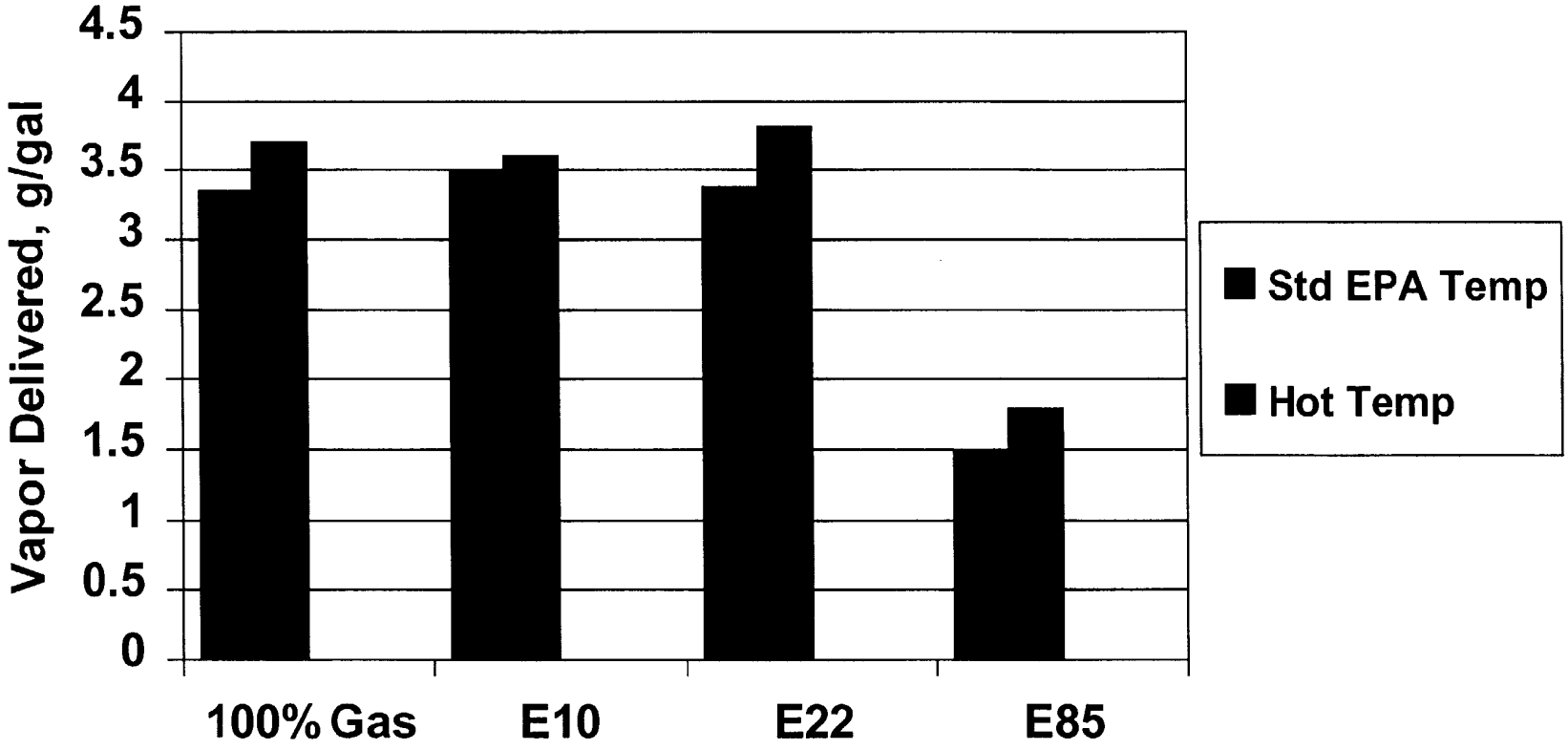
Ethanol Blend ORVR Study
Test Conditions

Fuel Tank:	20 Gallon Flex Fuel Tank
Fuel Delivery Rate:	10 gallons/minute
EPA Conditions:	Delivered Fuel = 67°F Fuel Tank = 80°F
High Temperature:	Delivered Fuel = 80°F Fuel Tank = 120°F

Effect of Ethanol Concentration on ORVR Vapor Generation



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Effect of Ethanol Concentration on Canister Performance

Evaporative Loading Conditions

Canister exposed to 10 adsorb/purge cycles

Fuel maintained at 40°C during vapor loading

Air bubbled through fuel mixture at a flow rate of 230 mL/min in all cycles

Canister purged 300 bed volumes each cycle

0.8 L partitioned test canister used in all testing

WV-A 1100, 10x25 carbon grade used in all testing

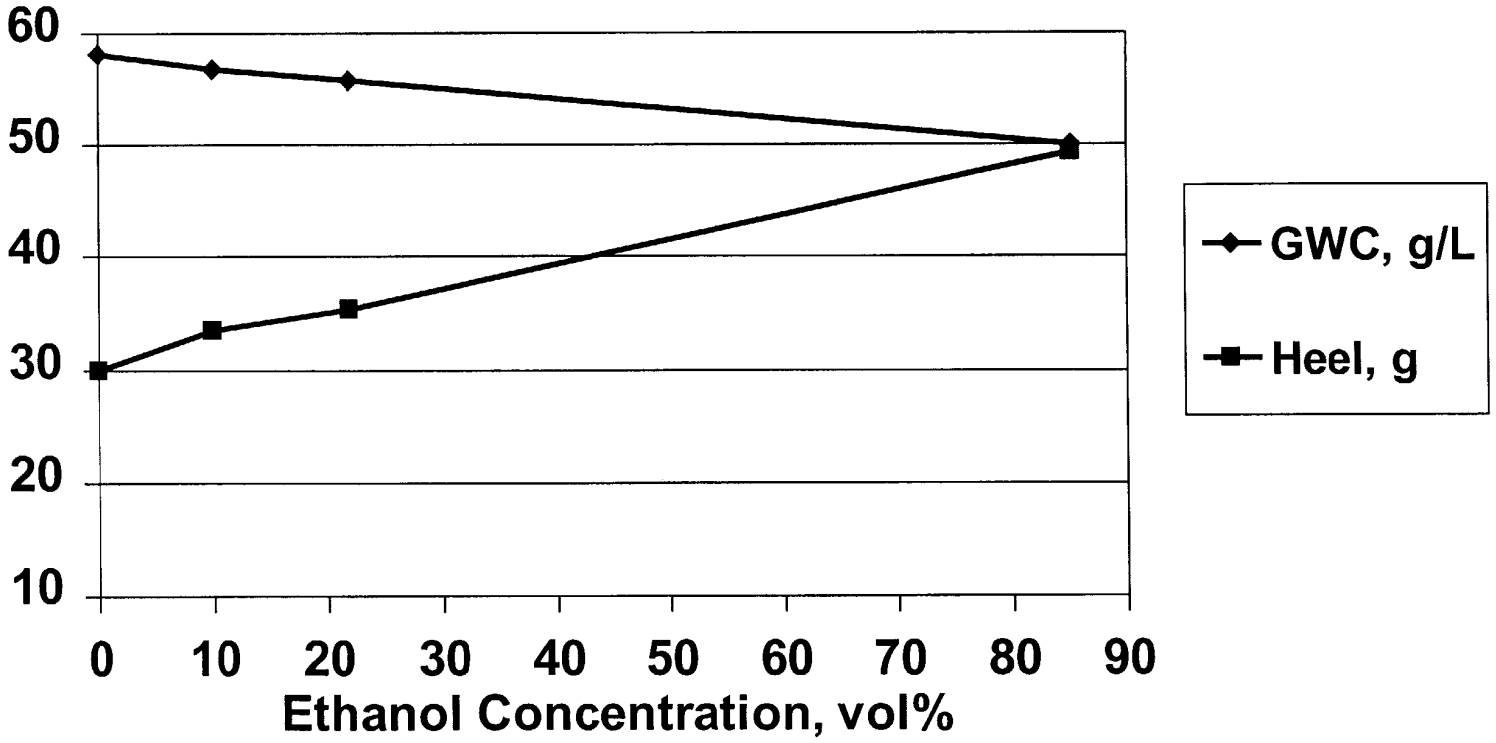
Vapor loading rate and concentration measured throughout testing

Working capacity based on average of cycles 8-10

Heel measured after cycle 10

Effect of Ethanol Concentration on Canister Performance

Evaporative Loading Conditions



WV-A 1100, 10x25
0.8 L Partitioned Test Canister
5000 PPM Breakthrough
10 Cycles Each Fuel Blend

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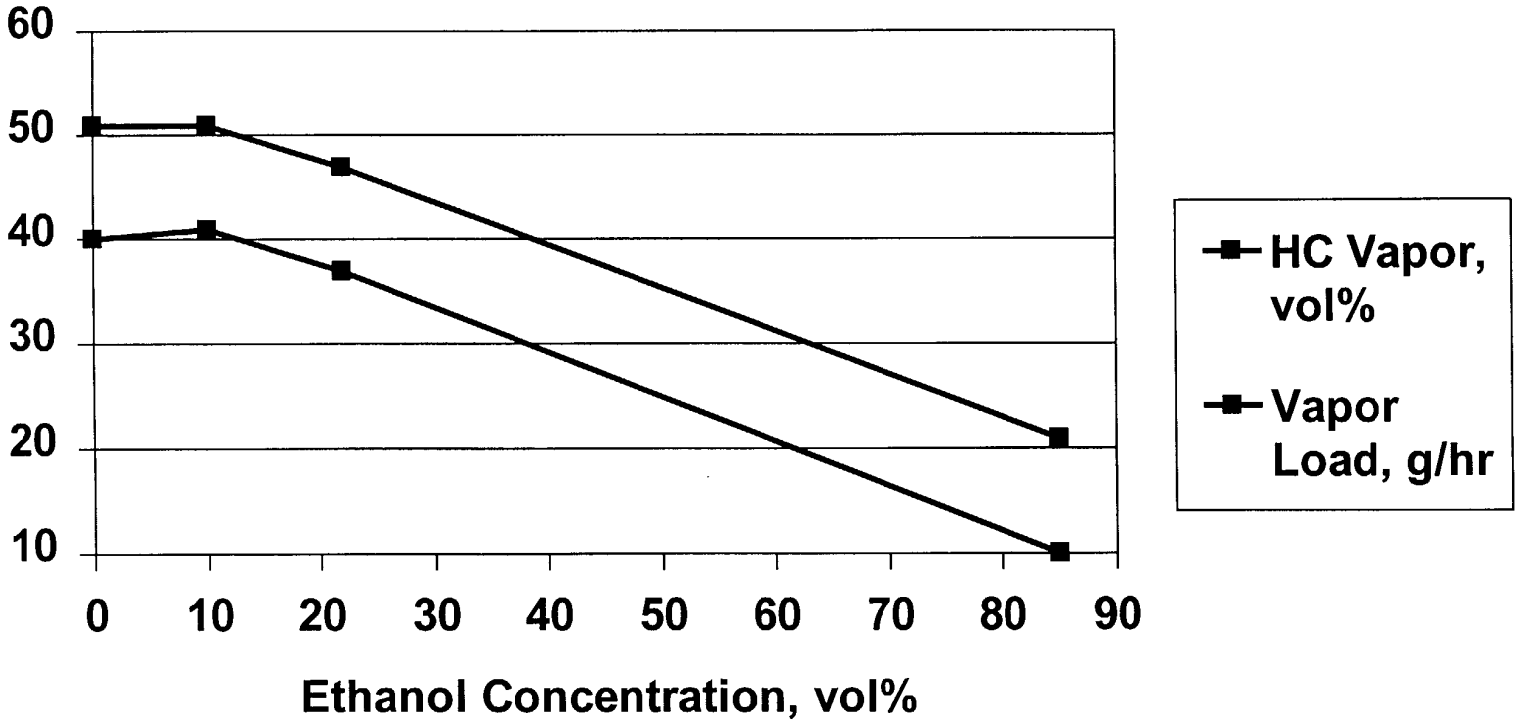
Effect of Ethanol Concentration on Canister Performance

Evaporative Loading Conditions



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